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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,238	09/12/2003	Rene Verdonk	920522-94798	6848
23644 7590 08/07/2007 BARNES & THORNBURG LLP P.O. BOX 2786 CHICAGO, IL 60690-2786			EXAMINER ALI, SHUMAYA B	
			ART UNIT 3771	PAPER NUMBER
			MAIL DATE 08/07/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/661,238	VERDONK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shumaya B. Ali	3771	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8-11, 15-18 and 22 is/are rejected.
- 7) ☒ Claim(s) 4, 12, 14 and 19-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1,3,6,8,11,15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kelly et al. US 5,529,573.**

As to claim 1, Kelly in figure 1 discloses a portable device for providing continuous passive motion (CPM), the portable device comprising a brace (10) and a drive mechanism (30,32,34, and 38), wherein the portable device is adapted for providing continuous passive motion of a limb of a human or animal body having a torso (col.1, lines 21-28), the limb comprising a distal end and a proximal end, the distal end being connected to the proximal end with a first joint (ankle joint, see fig.1A), the proximal end being connected to the torso with a second joint (knee joint, see fig.1A), wherein said brace is adapted for supporting the distal end of the limb (see fig.1A); wherein said drive mechanism is adapted for providing a settable continuous passive motion of the first joint and/or the second joint of the limb (see col.2, lines

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36-61), said drive mechanism being coupled to said brace (see fig.1) and controlling movement of the distal end of the limb (when the drive mechanism is set to provide CPM, the mechanism causes extension and flexion of the limb. During said extension and flexion movement, the device of Kelly will cause limb to pivot at hinge axis 22/25, see fig.1, thus will allow movement at the distal end of the limb, see also col.3, lines 63-67, and col.4, lines 1-10), e) said passive motion is controlled in a first control point (rotation axis of hinge 25) and a second control point (rotation axis of hinge 22) on the distal end of the limb; and said drive mechanism comprises at least a first unit (32) for controlling movement of said first control point (by turning off/on 32) on distal end of the limb.

**As to claim 3,** Kelly discloses wherein the device furthermore comprising means for immobilizing (fig.1, 34) said second control point of the distal end of the limb.

**As to claim 6,** Kelly discloses wherein the brace comprises a support (20) for said distal end of the limb comprising a first primary sub-frame (20) for supporting said distal end of the limb, a support (17) for said proximal end of said limb comprising a second primary sub-frame (17) supporting said proximal end of the limb, a hinge (23) for connecting said support for said distal end of the limb to said support for said proximal end of the limb.

**As to claim 8,** Kelly discloses wherein said positioning means comprises an inflatable housing (19) of flexible material provided with a fastening means (16,42), said housing allowing at least partial deformation when fastened on a body for providing a stable position (col.6 lines 27-50).

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**As to claim 11**, Kelly discloses wherein said brace for supporting the distal end of the limb is adjustable in order to fit the length of the distal end of the limb of the user (in col.3, lines 65-67 Kelley discloses that the upper leg is positioned in the brace 20, thus, the brace inherently has to be adjustable in order to allow positioning of the length of the distal end of the limb).

**As to claim 15**, Kelly discloses wherein the device further comprising a remote control unit (34) for controlling the passive movements provided by the device.

**As to claim 17**, Kelly discloses wherein the device further comprising two connectors (wires connecting 36 and 34 to 30), provided at the upper side of the device, whereby one connector (wire connecting 34 to 30) is connected to the remote control unit and the other connector is connected to an electric transformer (36) or one or more batteries.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 2, 5, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly et al. US 5,529,573.**

As to claim 2, Kelly discloses the claimed invention as applied for claim 1 with the exception of wherein said drive mechanism further comprises a second unit for controlling the movement of said second control point of the distal end of the limb. However, Kelly teaches one drive unit for both first and second control point (col.3 lines 25-59). Since one control unit is capable of providing the same function as the second unit as claimed, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a second control unit, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St Regis Paper Co. V. Bemis Co.*, 193 USPQ 8.

As to claim 5, Kelly discloses the claimed invention as applied for claim 1 with the exception of wherein said drive mechanism for providing a settable continuous passive motion of said limb is a programmable motor. However, Applicant has not established why

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“programmable” motor is crucial in terms of providing a specific function and/or solving a stated problem. Furthermore, the type of motor used is a design consideration because the type of motor used would not affect the device’s ability to provide CPM at two points distal to the limb. Therefore, it would have been an obvious matter of design choice to modify Kelly in order to obtain the invention as specified in claim 5.

**As to claim 22**, Kelly lacks explicit teaching of wherein the brace is an arm brace. However, Kelly teaches CPM applied to an injured limb (see col.1, lines 21 and 22). Thus, the device of Kelly is capable of supporting upper limb, hence arm as well. Kelly’s brace has an upper support (fig.1, 20) that would allow an arm to rest, a lower support (fig.1, 12) that would allow positioning of a wrist, and hinge (fig.1, 22) in between the two supports will allow extension of flexion of the arm. Thus, there is no structure in Kelley’s device that will prevent it from being an arm brace.

**Claims 9,10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly et al. US 5,529,573 in view of Saringer et al. US 5,738,636.**

**As to claim 9**, Kelly lacks wherein said support of the distal end of the limb of said brace is furthermore provided with a limb fastener, and said support of the proximal end of the limb of said brace is furthermore provided with a limb fastener. **As to claim 10**, Kelly further lacks wherein said fasteners for the distal end and the proximal end of the limb comprise fixing straps. However, Saringer teaches claimed strap and father teaches hook and loop type straps, which are considered “fixing straps” since they are capable of fixing the device to a wearer in a secure position. Saringer’s straps allow securing of a brace to the user’s body (see col.4 lines 22-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention



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was made modify Kelly to provide limb fastener and fixing straps for the purpose of securing the device to the user's limb as taught by Sarteringer.

As to **claim 16**, Kelley discloses wherein said remote control unit comprises control switches (32), however lacks a visual display screen, however, Sarteringer's figure 12 discloses a brace with a controller, more specifically a front panel which is considered "a visual display screen" for indicating whether the user has started (as indicated by a hand symbol in fig.12) or stopped (as indicated by another symbol next to a stop label) a program for controlling a joint movement. The user depresses switch (204) to provide ankle (joint) movement and when the switch is released to stop actuator or to program the range of motion (see col7 lines 55-64). Therefore, it would have been obvious to one of ordinary skills in the art at the time the invention was made to provide a visual display screen to the device of Kelley for allowing the user to have a visual representation of the type of program that is being set or adjusted to limit the range of motion for a joint movement as taught by Sarteringer.

#### ***Allowable Subject Matter***

Claims 4, 12,14, and 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Applicant's arguments with respect to drawing objections and rejection under 35 USC 112 filed on 5/14/07 (see pages 7 and 8 of the remark filed on 5/14/07) have been fully considered, said objection and rejection are hereby withdrawn.



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Applicant's arguments with respect to the contact points 16 and 17 of Kelly US'573 are not located on the proximal end of the limb and thus Kelly US'573 does not disclose a first and a second control point on the distal end of the limb, not in the drawings and not in the specification (see remark filed on 5/14/07, page 9, lines 33-36) have been fully considered but they are not persuasive. Examiner apologize for misrepresenting the contact points, however, Kelly US'573 teaches a first and a second contact point on the distal end of the limb as stated in the above rejection.

Applicant's argument with respect to "From Kelly, it is not clear how a skilled person would be guide to the features of the present claim 1. Nothing in Kelly teaches, points to over even suggest the provision of the features of present claim 1. It is not clear how the device of Kelly could be modified by the person of ordinary skill, taking the teaching of Kelly into account, for providing two control points on the distal end of the limb for controlling the CPM," (see remark filed on 5/14/07, page 9, lines 42-47) is fully considered, however, is not well taken; because Kelly teaches the limitation of claim 1 as cited in the above rejection. Furthermore, Kelly teaches a CPM device which supports distal end of a limb as depicted in figure 1A, where the movement of the limb can be controlled at hinge points 25 and 22 to respectively allow movement along the axis of knee and ankle joints, which are respectively considered claimed first and second points (see figure 1). These two joints are indeed located at the distal end of the limb (see fig.1A). Furthermore, Kelly discloses a control device 34 (see fig.1) that can be manipulated to stop or allow (see col.3, lines 57-59) CPM (continuous extension or flexion) along the two joints/control points. Thus, the limitation of claim 1 is considered unpatentable over Kelly' US 573.

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***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

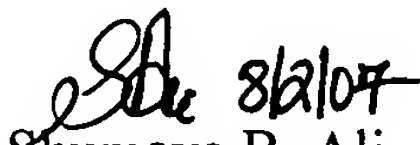
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shumaya B. Ali whose telephone number is 571-272-6088. The examiner can normally be reached on M-W-F 8:30am-5:00 pm.

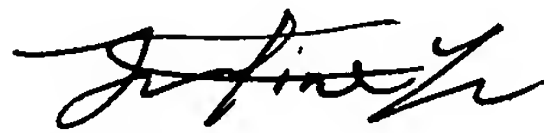
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Shumaya B. Ali  
Examiner  
Art Unit 3771

  
JUSTINE R. YU  
SUPERVISORY PATENT EXAMINER  
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8/3/07